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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/419,720 10/14/99 KRICHTAFOVITCH

I PFUHRI

EXAMINER

MM91/1221

THOMPSON E FEHR

SUITE 703

THE AEROSPACE CENTER

1104 COUNTRY HILL DRIVE

OGDEN UT 84403

ALEMU, E

ART UNIT

PAPER NUMBER

2821

DATE MAILED:

12/21/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/419,720

Applicant(s)

KRICHTAFOVITCH ET AL

Examiner

Ephrem Alemu

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
 2. ☐ received in Application No. (Series Code / Serial Number) _____.
 3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 20) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Oath/Declaration

2. A new oath or declaration is required because the declaration is executed for a single inventor not for plural inventors. The Examiner suggests changing "I" to --We-- or executing a separate Oath/Declaration for each inventor. The wording of an oath or declaration cannot be amended. If the wording is not correct or if all of the required affirmations have not been made or if it has not been properly subscribed to, a new oath or declaration is required. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 1, 2, 3, 5, 6, 8-10, 12-16, 18, 20, 21, 23, 24, 26, 28, 29, 31-33, 36, 37 and 40-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. These claims are an omnibus type claims.

In claims 1 and 14, there is no clear interrelationship of the corona and exciting electrodes with a power supply. There must be a recitation of a power supply in order to define a complete and operable accelerator.

In claims 2, 3, 10, 15, 16, 18, 26 and 33 the recitation of the limitation "the voltage" in line 2, respectively makes the claim being indefinite because there is insufficient antecedent basis for this limitation in each claim.

In claims 5, 6, 8, 9, 12, 13, 20, 21, 23, 24, 28, 29, 31, 32, 36, 37, 40 and 41, the recitation of "one or more additional electrostatic fluid accelerators as recited in claim x", where x represents the appropriate claim in which the above claims depends upon, prevents the scope from being clear because it appears to be reciting having a multiple accelerator system. This type of language fails to further limit the claim that depends on. In other words, Claim 1, for example, recites a single accelerator, and Claim 5 recites an additional accelerator. That additional one is not part of the one recited in Claim 1. A system, rather, is implied here.

In Claim 42, it is improper to refer to any structure in the prior art. The statute requires that the invention be set forth in clear terms. Thus, the language, "any...that is well known in the art..." is not definite. Additionally, an accelerator is an element of a "corona discharge device", rather than the other way around, recited in this claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Gourdine (US 3,582,694).

Re claims 1, 2, 3, 5, 6, 8-10, 12, 13, and 43-45 1-xx, Gourdine discloses an electrogasdynamic system comprising plurality of electrostatic fluid accelerators (electrogasdynamic (EGD) stage) that are located downstream, with respect to the desired direction of fluid flow, from the preceding electrostatic fluid accelerator (Figs. 1, 3; Col.3, lines 62- 65); and

at least one collecting electrode located between at least one pair of the electrostatic fluid accelerators (22) (Col. 4, lines 1-11); wherein each electrostatic fluid accelerators comprises: a multiplicity of closely spaced corona electrodes (18);

at least one exciting electrode (attractor electrode, 20) asymmetrically located between the corona electrodes; and

a high voltage power source for supplying power to the electrodes (49) (Fig. 1; Col. 5, line 37- Col. 6, line16; wherein the voltage between the corona electrodes and the exciting electrodes is maintained between the corona onset voltage and the breakdown voltage).

Re claims 4, 7 and 11, Gourdine further shows that the exciting electrode is a plate that extends downstream with respect to the desired direction of fluid flow (Fig. 1, Col. 3, line 46-48).

Re claims 14-18, 20, 21, 23, 24-26, 28, 29, 31-34, 36-38, 40 and 41, Gourdine discloses an electrogasdynamic system comprising plurality of electrostatic fluid accelerators (electrogasdynamic (EGD) stage) that are located downstream, with respect to the desired direction of fluid flow, from the preceding electrostatic fluid accelerator (Figs. 1, 3; Col.3, lines 62- 65);

at least one collecting electrode located between at least one pair of the electrostatic fluid accelerators (22) (Col. 4, lines 1-11); wherein each electrostatic fluid accelerators comprises: a multiplicity of closely spaced corona electrodes (150) (Fig. 8);

at least one exciting electrode (attractor electrode, 149) asymmetrically located between the corona electrodes (Fig. 8);

at least one accelerating electrode (second attractor electrode, 153) (Fig. 8; Col. 17, line 69- Col. 18, line 23; wherein the accelerating electrode is either attracting or repelling electrode); and

a voltage source for supplying power to the electrodes (154) (Fig. 8; Col. 5, line 37- Col. 6, line16; wherein the voltage between the corona electrodes and the exciting electrodes is maintained between the corona onset voltage and the breakdown voltage).

Re claims 19, 22, 27, 30, 35 and 39, Gourdine further shows that the exciting electrode is a plate that extends downstream with respect to the desired direction of fluid flow (Fig. 1, Col. 3, line 46-48).

Re claim 42, as best understood claim 42 is rejected for the same reason given above as in claim 1.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Torok et al. (US 5,077,500); Nagoshi et al. (US 5,055,118); Santamaria (US 4,600,411); Terai (US 4,567,541); Purser (US 5,661,299); Feldman et al. (US 5,707,428); Gourdine (US 3,582,694); also teach similar inventive subject matter.


Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (703) 306-5983. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K Wong can be reached on (703) 308-4856. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

EA
12-15-00


Don Wong
Supervisory Patent Examiner
Technology Center 2800